

WHAT IS CLAIMED IS:

1. A dyeing method of a plastic lens, including the steps of:
placing the lens in a vacuum vapor deposition device;

placing a base body for dyeing in the vapor deposition device, the
5 base body having a dye application area in which a sublimatable dye is
applied, so that the dye application area faces a surface of the lens to be
dyed; and

heating the base body in the vapor deposition device under almost a
vacuum, while restraining a rise in temperature of the lens, to sublimate
10 the dye, depositing the sublimed dye on the lens.

2. The dyeing method according to claim 1 further including the
step of fixing the deposited dye on the lens by heating, under atmospheric
pressure, the lens on which the dye has been deposited.

15 3. The dyeing method according to claim 2, wherein the deposition
step includes restraining the rise in temperature of the lens to maintain
the temperature of the lens in a temperature range needed to bring a color
density of the lens to be obtained after the fixing step to within a
20 predetermined color difference with respect to the desired color density.

4. The dyeing method according to claim 1, wherein the deposition
step includes cooling the vapor deposition device to restrain the rise in
temperature of the lens.

25 5. The dyeing method according to claim 4, wherein the deposition
step includes cooling the vapor deposition device in which the lens is
placed, to control the temperature of the lens before a dyeing operation to

70°C or less.

6. The dyeing method according to claim 1 further including the step of making a hard coat layer from a hard coating liquid on the lens prior to the deposition of the dye.

7. The dyeing method according to claim 6, wherein the hard coating liquid contains tetrafunctional silane in a solids content of 30% or less by weight.

8. A dyeing device for dyeing a plastic lens, including:
a lens placing unit with which the lens is placed in the dyeing device;
a base body placing unit with which a base body for dyeing is placed in the device; the base body having a dye application area in which a sublimatable dye is applied, so that the dye application area faces a surface of the lens to be dyed;

a pump which produces almost a vacuum in the device;
a heating unit which heats the base body placed in the device to sublimate the dye, depositing the sublimed dye on the lens; and
a cooling unit which cools the device to restrain the temperature rise of the lens.

9. The dyeing device according to claim 8, wherein the cooling unit is mounted on an external wall of the device in contact therewith and cools the device by heat exchange.

10. The dyeing device according to claim 8 further including:
a detection unit which detects a temperature of the external wall of

the device; and

a control unit which controls the cooling unit based on the detected temperature.

5 11. The dyeing device according to claim 8, wherein the cooling unit cools the device in which the lens is placed, to control the temperature of the lens before a dyeing operation to 70°C or less.

10 12. A dyeing method of dyeing a plastic lens, including the steps of making a hard coat layer on the lens from a hard coating liquid containing tetrafunctional silane in a solids content of 30% or less by weight;

placing the lens on which the hard coat layer is made in a vacuum vapor deposition device;

15 placing a base body for dyeing in the vapor deposition device, the base body having a dye application area in which a sublimatable dye is applied, so that the dye application area faces a surface of the lens to be dyed; and

20 heating the base body in the vapor deposition device under almost a vacuum to sublime the dye, depositing the sublimed dye on the lens.